neglect which, however fully disproved, invariably damages his practise.

The foregoing is a faithful account of the present drawbacks to private practise, and it must be repeated that the insurance legislation in view will not improve matters. Medical men who have gone in for contract practise at all have been able to afford to do so thanks to their possession also of ordinary practise among the same class of persons. But under the National Insurance Bill the whole of the working class will be swept into the contract practise net, and a smaller income will almost certainly result from the same amount of work despite the absence of bad debts. There may also be an extension upwards of the contract system, and a great deal even of the best class of private practise may thus be abolished. Another disadvantage which can not be ignored is that it will become impossible to build up a practise which can be sold in part or altogether. Indeed the mere introduction of the bill has already lessened the value of many practises as facultative assets.—*British Medical Journal.*

SCIENTIFIC BOOKS

Publications of the United States Naval Observatory. Second Series. Volume VI., with ten plates. Volume VII. Washington, Government Printing Office. 1911.

In accordance with the new policy of the Naval Observatory by which volumes are issued from time to time as material suitable in nature and quantity for simultaneous publication becomes available, we find volume VI. of the present two volumes made up as follows: (1) the data and results of all the observations made with the two equatorial telescopes, the 26-inch and the 12-inch, since the removal to the new site, or for the years 1894–1907; (2) Appendix I., a series of thirty-six astronomical papers by various members of the staff, embracing a determination of the mass of Titan, of the Solar Parallax from observations of Eros, and determinations of the orbits of a number of satellites, minor planets and comets; (3) Appendix II., a presentation of the observations of the transit of Mercury in 1894 made by more than twenty-three professional and amateur astronomers at as many stations in the United States from the Atlantic to the Pacific coast; (4) Appendix III., a complete and minutely described list of the publications of the observatory, from the beginning in 1845 till 1908.

This volume is of special interest to a wider public inasmuch as it contains, we believe, the first series of plates that have been generally distributed in illustration of the buildings and equipment of the new observatory. The frontispiece exhibits the dome and the attached, low, office building of the great equatorial telescope, making one harmonious structure, with white marble walls, standing apart on the spacious grounds. Probably this is the most gracefully formed astronomical dome in the country, if not in the world. Similar praise is to be given when we regard the plate which gives a view of the front of the main building. Here, again are fitness and beauty of proportion, a simplicty of outline and detail, which are an honor to the architect, the late Richard Morris Hunt. Besides these there are six plates which exhibit the construction and equipment of the 26-inch telescope and one which gives a general view of the 12-inch telescope.

This volume contains the work of a number of observers who have succeeded one another at the instruments in kaleidoscopic change. Indeed, one who has followed the annual pamphlet reports of the superintendent for several years past, is likely to have his head full of visions of a chain of observers marching and counter-marching around a circle of instruments, and to get the conviction that our National Observatory properly belongs in Alice's Wonderland. But here is a great mass of original astronomical data which appear to have been carefully derived, and the full value of which can only come out upon comparison with similar results from the different observatories of the world. If certain astronomers, of a type not unrepresented in this volume, would confine themselves to careful observation and leave the theorizing in newspaper and magazine articles

to others of less exuberant imagination, current astronomy might stand better with the intelligent public.

Of Appendix I. special mention may be made of the following determinations: of the mass of Titan by Professor Eichelberger from observations made by the late Professor Asaph Hall at the old observatory; of the orbits of Deimos and Phobos by Mr. J. C. Hammond, from the observations made by Mr. H. L. Rice, and of the solar parallax by Mr. C. W. Frederick, from observations of Eros made by Professor See. Then follows a long series of determinations of orbits for members of that swarm of tiny planets known as asteroids, which the astronomical student is inclined to believe were designed by an unkind Providence to furnish exercises in computation, but which may yet again develop some new and important interest. Here it is a pleasure to find that Mr. Matt Frederickson employs his ingenuity to derive a simple, explicit equation for a certain unknown in place of the implicit equation solved by previous computers by means of a series of approximations.

Volume VII. might be classed under Archeology, inasmuch as it is presentation of results of observations made on three old meridian instruments in the period 1846–1852. The work of reduction and preparation for publication has only recently been done, under the leadership of Professors Eichelberger and Littell, and seems to owe its completeness very largely to the faithful and intelligent service by Miss Etta M. Eaton. This is a work, both as to observation and computation, which hardly any but a government observatory would be willing to undertake. The exhiliration of spirits arising from such deferred labor is like that due to a campaign of elimination in the garret when a family moving is at hand. Yet unsuspected values may develop amongst its results; and the recent discovery of a large drift in space on the part of a star whose earliest known position is recorded in the old Gilliss Catalogue of 1850, also worked up at our national observatory, is a cheering incident to the patient laborers in this field.

A large part of the transit observations entering into Volume VII., from the earlier part of the period, were made by the eye and ear method, which is still in vogue for occasional observations. In connection with the summary of measures of accidental errors affecting the results in this catalogue, it is interesting to note here, what seems almost incredible to the beginner, that the employment of the electric chronograph reduced the accidental error by only slightly over six per cent. As is well known, the liability to accidental error in the case of the experienced observer is sensibly the same in both methods.

These two volumes are dignified and handsome products from the Government Printing Office. One important economic problem of the day is the condensed presentation of scientific and other data without detracting from a proper appearance and a form intelligible in reference. The present volumes are too expansive in some portions but show in other parts a commendable tendency to compactness.

ALBERT S. FLINT

Polar Exploration. By Dr. W. S. BRUCE. New York, Henry Holt & Co. 1911. Pp. 256.

The geographer, the scientist and the intelligent, enquiring reader will alike find this volume of the Home University Library most disappointing. The most that can be said in its favor is the pleasant, though often inconsequential manner in which the author puts forward descriptive phases of polar physics, in which he is personally interested. It is evidently written for the English market only. Entitled "Polar Exploration," it makes no mention of the polar work of Kane, Hayes, Rodgers, De Long, Greely, Lockwood or any other American, save to refer to "the boyish pole hunt," and a sea-sounding by Peary. There are desultory chapters on Plant and Animal Life, Meteorology and Magnetism, but no reference to the incomparable scientific observations of the International Polar Station by thirteen nations, published in forty quarto volumes.

A. W. GREELY